

DESCRIPTION OF *MULLERIA DALYI*, N.SP., FROM INDIA.

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HITHERTO this genus has been represented by a single species, *Mulleria lobata*,¹ which occurs in some of the rivers of Colombia. Its existence outside the South American continent, in a region so remote as India, is most remarkable and worthy of record.

The genus *Mulleria*, with *Bartlettia* and *Ætheria*, constitute the family *Ætheriidae*, the two first being South American forms and the last African. Considering, therefore, the geographical position, one would have expected to have met with the African rather than the South American type in India.

Two of the specimens about to be described were collected in the Mysore province of Southern India, probably near Mudgiri in the Kadur District, by Mr. W. M. Daly, a resident in that country. They have been placed in my hands for examination by Mr. H. Fulton.

Other examples, containing the animals, have also very kindly been submitted to me by Mr. E. L. Layard. He obtained them from a relative, Mr. Herbert Bonner, who found them in the river Budra, in Mysore. Mr. Bonner writes:—"I find them on a rock in the middle of a deep pool, and so far I have not found them on other rocks, though no doubt they are to be found. They adhere very firmly, and since the rock is smooth and well under water, they are hard to detach. The water is quite fresh, being more than 400 miles from the point where the river joins the sea, and only some thirty miles from its source in the Western Ghauts."

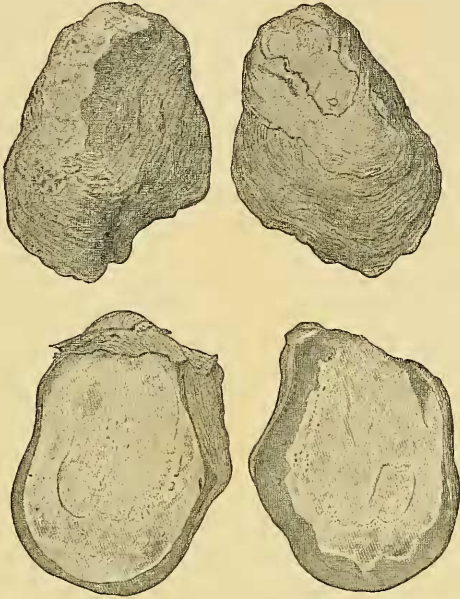
The shells exhibit the same irregularity of form which occurs in the South American species, and probably no two examples are precisely alike. None of the specimens clearly exhibit the characteristic embryonic shell, but the anterior end of the attached valves is more or less produced as in *Mulleria lobata*.

An examination of the animal shows that this genus is practically identical with *Ætheria* in respect to the soft parts, save in the absence of the anterior adductor. The mantle-lobes are free all round except just beneath the hinge-line, and posteriorly at the extremity of the branchiæ, where, however, the edges are free; above this connection is the anal opening. The lower or branchial opening extends from the hinder end of the gills as far as the hinge-line in front. The

¹ *Ætheria Novogranatensis*, Schaufuss (Sitzungs Ber. naturw. Gesell. Isis: Dresden, 1865, p. 10), is evidently the same species. The genus *Mulleria*, founded in 1823 and appearing in all textbooks since, seems to have been entirely overlooked by this author.

extreme margins of the lobes are of a dark-brownish colour, and very finely papillate within for a short distance ventrally from the posterior extremity.

The gills are unequal, the inner pair being somewhat larger than the outer. The mouth is large, and the labial palpi are united dorsally nearly their whole length. The body is produced into the branchial cavity, and has a foot-like appearance, whilst the anal tube is just above the large adductor as in *Ætheria*,¹ and, indeed, in all Pelecypoda.



MULLERIA DALYI, n.sp.

Testa irregulariter quadrata, sed postice producta et rotundata, compressa, inæqualis; valvæ mediocriter crassæ, intus margaritaceæ, iridescentes, olivaceo plus minus maculatæ et ad marginem olivaceo-fusco limbatæ, extus sub periostraco subfibroso, nigro-fusco, fortiter concentricè striato, ex laminis albis calcareis et aliis corneis fusciscentibus constitutæ; valva adhærens irregulariter planata, altera convexior, plus minus crosa; cicatrix musculi posterioris magna, elongata vel rotundata, mediocriter profunda, concentricè et radiatim striata; linea pallii irregularis, punctata, ad marginem superiori fere attingens; margo dorsi rectus, ligamento valido per totam longitudinem instructus. Long. 65, alt. 52, diam. 20 mm.

¹ Quoy in Lesson's *Illust. Zool.*, pl. lix; Rang & Cailland, *Mém. du Mus.*, ser. III, vol. III, p. 143, pl. vi; Deshayes, *Anim. sans Vert.*, vol. VI, pp. 591-6.

This species differs from *M. lobata* in the general tint of the internal nacre and the composition of the valves and the periostracum. In *M. lobata* the nacre is partly whitish and partly of an olive-greenish tint, and the border of the valves is a deeper green. In the present species the nacre exhibits an iridescent mixture of white, bluish, greenish, olive, and pinkish tints, whilst the margin is olive-brown. The exterior, also, is of a rich deep brown or blackish-brown in the present species, the periostracum being more fibrous. The structure of the valves is much less solid, and consists of alternating calcareous and chitinous layers. The solid valves of *M. lobata* are harder in substance, and the periostracum is not so conspicuous.

Two of the specimens of the present species have been attached by their right valves and three by the left, and, as in the South American species, these are more produced anteriorly than the respective free valves. At the extremity of the umbo in better preserved examples, the young shell would doubtless be visible. I have much pleasure in naming the species after Mr. Daly.
